

2. A Study of the Larks of Southern Africa. By R. BOWDLER SHARPE, F.L.S., F.Z.S., Senior Assistant, Zoological Department, British Museum.

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(Plates LXXV. & LXXVI.)

Having lately had occasion to revise some of the families of birds for a new edition of Layard's 'Birds of South Africa,' I found that few presented such difficulties as the *Alaudidæ*. South Africa is the home of the Larks, possessing no less than nine genera and twenty-two species; but the greatest confusion exists with regard to the latter, and it has been the object of the present paper to reduce them to order. The superabundance of species has arisen in a great measure through the fact of most of the Larks of South Africa having a very distinct winter plumage, which has been regarded as specifically distinct; while at the same time I believe that there are not present in South Africa European genera such as *Alda* &c. The following table of genera has been compiled with a special view to determining the South-African genera, certain European and Asiatic forms being placed in order to indicate their affinities; but, from want of perfect specimens in some instances, I have no doubt that modifications may be expected in the Asiatic genera. My main object, however, has been to elucidate the characters of such forms as come within the limits of the present essay. I have to return my thanks to Canon Tristram, Captain Shelley, Mr. T. E. Buckley, and Mr. J. H. Gurney for the loan of specimens. In addition to their collections, the basis of this essay rests upon the series in my own cabinet and that of the British Museum, whither my own collection will shortly be removed.

Key to the Genera.

- a. Culmen longer than, or equal to, the middle toe and claw.
 - a'. First primary long, about equal to, or a little longer than, the tarsus.
 - a''. Hind claw long and perfectly straight 1. *Certhilauda*.
 - b''. Hind claw rather short and curved.
 - a'''. Bill long and slender, measuring from gape to tip about the same as the tarsus..... 2. *Alæmon*.
 - b'''. Bill short and stout, much shorter than tarsus when measured as above.
 - a⁴. Nostrils uncovered 3. *Heterocorys*.
 - b⁴. Nostrils hidden by bristles 4. *Ammomanes*.
 - b'. First primary rudimentary, shorter than tarsus 5. *Alaudula*.
 - c'. First primary feebly developed, not equal to half the tarsus.
 - 6. *Rhamphocorys*.
- b. Culmen shorter than middle toe and claw.
 - d. No lateral elongated tufts on the head.
 - e'' Crest-feathers shorter than tarsus.
 - e'''. First primary rudimentary, shorter than inner toe and claw.
 - e⁴. Distance between tips of primaries and tips of secondaries less than tarsus.



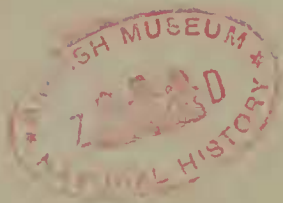
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1. MIRAFRA FRINGILLOIDES.
2. " DAMARENSIS.

J. G. Keulemans del

Mintern Bros imp





G. Heuglin del.

Miner Bros. imp.

1. HETEROCORYS BREVIUNGUIS.
2. AMMOMANES GRAYI.



Chersomanes africana, Cab. Mus. Hein. Th. i. p. 126 (1850).

Alamon africana, Licht. Nomencl. Av. p. 39 (1854).

Certhilauda capensis, Gray, Handl. B. ii. p. 120 (1870).

Adult. Above brown, slightly washed with sandy colour and streaked with dark brown centres to the feathers, many of which are tipped with whitish; hind neck greyish; wing-coverts darker brown, washed with sandy colour on the outer web, and tipped with whitish, the primary coverts narrowly tipped with the latter colour also; quills ashy brown, narrowly margined with sandy buff, the innermost secondaries with a broad whitish margin; rump and upper tail-coverts sandy rufous, with dark brown central streaks to the feathers; upper tail-coverts ashy brown, darker brown in the centre of the feathers; tail-feathers dark brown, narrowly margined with ashy fulvous, the two middle ones washed with greyish, the outermost margined and tipped with pale sandy buff; a very distinct eyebrow creamy white; feathers under the eye dusky white, those in front of the latter blackish; ear-coverts dull sandy colour; cheeks whitish, minutely spotted with black; chin white; rest of under surface buffy white, the breast slightly washed with sandy colour, the lower throat, fore neck, and breast plentifully marked with triangular spots of black, larger and more longitudinal on the lower breast and sides of the body; sides of the upper breast shaded with ashy; under wing-coverts sandy buff, the outermost minutely spotted with dark brown, the lower series ashy brown, like the inner lining of the wing, the inner webs being pale rufous near the base; under tail-coverts white, broadly streaked down the centre with black; "bill yellowish brown, shaded with umber-brown; legs and toes clear buff-orange, tinted with flesh-red; claws yellowish brown, shaded with umber-brown; iris dark brown" (*Sir A. Smith*). Total length 7.4 inches; culmen 1.05, wing 3.9, tail 3.0, tarsus 1.15.

Female. Coloured like the male (*Sir A. Smith*).

Hab. South Africa: "common in most parts of the colony" (*Layard*); Natal (*Ayres*).

Specimens examined.

E mus. R. B. S.:—*a*, ad. S. Africa (*E. L. Layard*). *b*, *c*. George, S. Africa (*H. Atmore*).

E mus. H. B. Tristram:—*a*. South Africa (*E. L. Layard*).

2. *CERTHILAUDA GARRULA*.

Certhilauda garrula, Smith, Ill. Zool. S. Afr. pl. cvi. fig. 1 (1849); Bp. Consp. i. p. 246 (1850); Layard, B. S. Afr. p. 216 (1867); Gray, Handl. B. ii. p. 121 (1870).

Chersomanes garrula, Cab. Mus. Hein. Th. i. p. 126 (1850).

Alauda garrula, Giebel, Thes. Orn. i. p. 296 (1872).

Adult male (type of species). Above very dark brown, with narrow margins of sandy fulvous, the hind neck inclining to ashy grey,

the head rather darker than the back, and slightly streaked with rufous, the margins to the feathers being of this colour; wing-coverts dark brown, with sandy fulvous margins, the greater series paler brown, some of the coverts slightly margined with white; quills paler brown, margined with ashy fulvous and tipped with white, the secondaries washed on the outer web with ashy grey, and with rufous on the inner web, and tinged with the same at the tip, the lower surface of the wing ashy brown, the rufous margins very distinct on the inner secondaries; upper tail-coverts bright rufous, some of them margined with whitish; tail-feathers dark brown tipped with white, and rufous at the base, like the upper tail-coverts, this colour extending further on the centre feathers, which are shaded with ashy but not tipped with white; forehead tinged with rufous; ear-coverts and a streak above them bright rufous, but not forming a distinct eyebrow; lores buffy whitish; cheeks and throat white, the former with a few specks of brown; rest of under surface bright sandy rufous; the under wing-coverts light isabelline, those on the outer edge of the wing more rufous; on the breast a few spots of dark brown, and on the sides of the upper breast a few streaks of the same: "upper mandible of the bill and the lower towards the point reddish brown, the latter towards the base reddish yellow lightened with flesh-red; legs and toes intermediate between Dutch orange and sienna-yellow, and tinted with flesh-red; claws of the same colour as the legs, shaded with brown; eyes a bright clear brown" (*Sir A. Smith*). Total length 6·7 inches, culmen 0·9, wing 3·7, tail 2·6, tarsus 1·35.

Adult female. Similar to the male, but much smaller, and having a shorter bill. Total length 5 inches, culmen 0·7, wing 3·25, tail 2·1, tarsus 1·1.

Young. Very like the adult, and of the same dark brown colour, but distinguished by very distinct white edgings to the dorsal feathers, wing-coverts, and secondary quill-feathers.

In my 'Catalogue of African Birds,' I united all the small *Certhi-
lauda* of South Africa under one name, *C. rufula*; but I believe now that this determination was erroneous, and that there are two species, one a rufous and one a dark brown species. I have what appears to be a good series of each of them in all plumages, and consider them distinct, the following being the measurements of the series.

	Total length. in.	culm. in.	wing. in.	tarsus. in.
1. ♂ ad., S. Africa (<i>Sir A. Smith</i>)	6·7	0·9	3·7	1·35
2. ♀ ad., " "	5·0	0·7	3·25	1·1
3. ♂ ad., " "	6·3	0·9	3·4	1·25
4. ♂ ad., Port Elizabeth (<i>Ortlepp</i>)	6·0	0·8	3·3	1·1
5. ♂ ad., " "	6·4	0·9	3·5	1·2
6. ♂ ad., Colesberg "	6·1	0·85	3·6	1·1
7. ♀ juv., Natal (<i>Wahlbery</i>)	5·0	0·65	3·0	1·0

Compared with *C. rufula*, the measurements are as follows:—

	Wing. in.	culm. in.	tarsus. in.
<i>C. rufula</i> ♂	3·3–3·5	0·85	1·0–1·1
<i>C. garrula</i> ♂	3·3–3·7	0·8–0·9	1·1–1·35
<i>C. rufula</i> ♀	3·0–3·25	0·7–0·75	1·0
<i>C. garrula</i> ♀	3·0–3·25	0·65–0·7	1·0–1·1

The measurements of the two species, therefore, are not so very different, and they can only be separated by the colour. This seems to be very constant; and as I have the species before me in all plumages, I reiterate the distinctness of these two Larks.

Hab. “The northern parts of the colony” (*Smith*); Colesberg (*Ortlepp*); Port Elizabeth (*Ortlepp*); Natal (*Wahlberg*).

Specimens examined.

a, ♂ ad. South Africa (*Sir A. Smith*, type of species). *b*, ♀ ad. South Africa (*Sir A. Smith*). *c*, ♂ ad. South Africa.

E mus. R. B. S.:—*a*, ♀ ad. Colesberg (*Ortlepp*). *b*, *c*, ♂. Port Elizabeth, June 5 and August 30, 1869 (*Ortlepp*). *d*, ♂ ad. Interior of Natal, May 9, 1842 (*Wahlberg*).

3. *CERTHILAUDA RUFULA.*

Anthus rufulus, Vieill. N. Diet. xxvi. p. 494 (1818); id. Gal. Ois. ii. pl. clxi. (1825); Bp. C. R. xxxviii. p. 65 (1854).

Certhilauda albofasciata, Lafr. Mag. de Zool. 1836, Ois. pl. 58; Gray, Gen. B. ii. p. 383 (1844).

Alæmon albofasciata, Licht. Nomencl. p. 39 (1854).

Certhilauda garrula, Ayres, Ibis, 1869, p. 295 et 1871, p. 268.

Certhilauda rufula, Sharpe, Cat. Afr. B. p. 71 (1871); Gurney in Anderss. B. Dam. Ld. p. 201 (1872).

Adult male. Above bright sandy rufous, with narrow and indistinct brown centres to the feathers, many of which are also margined with buffy white in a more or less conspicuous manner; the head of the same rufous as the back, with slight fulvous margins and small dark brown centres to the feathers; lores and a very indistinct eye-brow buffy white; ear-coverts uniform bright sandy rufous; cheeks buffy white, with a few tiny spots of brown; quills sandy brown, with white margins to the feathers, which are all dark brown in the centre, the greater coverts externally inclining to greyish; quills ashy brown, the primaries tipped with whitish, the secondaries darker, externally margined with sandy rufous inclining to buffy white towards the tips of the feathers; rump and upper tail-coverts nearly uniform rufous, the long plumes of the latter dark brown in the centre and narrowly tipped with whitish; tail blackish, with a large spot of white at the tip of all the feathers except the two centre ones, which are rufous, more or less marked down the centre with greyish brown, all the feathers more or less rufous towards the base, this colour sometimes extending for half the feather; the external

rectrix narrowly margined on the outer web with buffy white; throat entirely white; rest of under surface of body bright sandy rufous, with a few more or less distinct white margins to some of the feathers; the breast minutely spotted with dark brown; under wing-coverts pale sandy rufous, those on the edge of the wing slightly mottled with brown; "iris hazel" (*Atmore*).

Total length 6.1 inches, culmen 0.85, wing 3.7, tail 2.6, tarsus 1.15.

Adult female. Similar to the male in colour, but smaller, and having a much shorter bill.

Total length 5.5 inches, culmen 0.75, wing 3.5, tail 2.1, tarsus 1.05.

Young. The young bird is principally distinguished by its spotted plumage, the white margins to the feathers of the upper surface being rather spots than terminal margins, and further discriminated by small subterminal black spots. Around the hind neck is a distinct shade of fulvous, almost forming a collar and much plainer than in the adult bird; the margins to the wing-coverts very broadly and distinctly white; throat, lores, and a scarcely perceptible superciliary line white; rest of under surface pale sandy rufous, becoming gradually more fulvous on the abdomen; the breast slightly spotted with pale brown, the feathers margined with whitish.

In winter the young bird is very different, having very broad circular margins of white to all the feathers of the upper surface, with obscure brown central streaks, the under surface very pale and with scarcely any perceptible brown spots on the breast.

What I consider to be the winter plumage of this species is represented by two Damara specimens in my collection. These birds are very pale sandy colour, narrowly streaked with dark brown shaft-lines; throat white; rest of under surface pale sandy isabelline, with only the faintest trace of eight brown spots on the breast.

This is a species which varies much in size, as will be seen by the following measurements.

	Total length. in.	bill. in.	wing. in.	tarsus. in.
1. ♂ ad., Hope Town (<i>Atmore</i>)	6.2	0.85	3.5	1.05
2. ♂ ad., Great Namaqua Land (<i>Andersson</i>)	6.1	0.85	3.45	1.0
3. ♂ juv. (winter), Wilson's Fountain (<i>Andersson</i>)	5.9	0.9	3.5	1.1
4. ♀ ad. (winter), Damara Land (<i>Andersson</i>)	4.6	0.75	3.0	1.0
5. ♂ ad. (winter), Damara Land (<i>Andersson</i>)	5.7	0.85	3.3	1.05
6. ♀ juv., Great Namaqua Land (<i>Andersson</i>)	5.6	0.7	3.25	1.0

It will be noticed by the list of localities that it also seems to have a more northern range than *C. garrula*, though it probably meets that species in the eastern districts of South Africa, as also at Colesberg;

but whereas the present bird appears to be not un plentiful in Damara Land, *C. garrula* was not met with there by Andersson.

Hab. Colesberg (*Ortlepp*); Griqua Land (*Atmore*); Transvaal (*Ayres*); Damara Land (*Andersson*).

Specimens examined.

E mus. Brit:—*a*, juv. South Africa (*Sir A. Smith*). *b*, *c*, ♂ ad., ♀ juv. Kami's River, Great Namaqua Land, May 20, 1862 (*C. J. Andersson*).

E mus. R. B. S.:—*a*, *b*, ♀ ad. Colesberg (*Ortlepp*). *c*, ♂ ad. Hope Town (*T. C. Atmore*). *d*, ♀ juv. Kami's River, May 20, 1862 (*C. J. Andersson*). *d*, ♂ juv. Wilson's Fountain, May, 29, 1872 (*C. J. A.*). *e*, *f*, ♂ ♀ ad. Damara Land (*C. J. A.*)

E mus. II. B. Tristram:—*a*, *b*, ♂. Transvaal (*Ayres*). *c*, ♀ ad. Transvaal, May 1870 (*Ayres*).

Genus 2. ALÆMON.

Alæmon, Keys. & Blas. Wirb. Eur. p. xxxvi Type.
(1840)..... *A. desertorum*.
Calendulauda, Blyth, J. A. S. B. xxiv. p. 258
(1855)..... *A. nivosa*.

The type of this genus is the well-known Desert- or Bifasciated Lark. It differs from the true *Certhilauda* of Southern Africa in its short hind claw, which is curved.

Key to the Species.

a. Larger; under wing-coverts isabelline, as well as the inner web of the quills at base 4. *semitorquata*.
b. Smaller; under wing-coverts ashy brown, as also the inner lining of the wings 5. *nivosa*.

4. ALÆMON SEMITORQUATA.

Certhilauda semitorquata, Smith, Rep. S. Afr. Exp. p. 47 (1836); Gray, Gen. B. ii. p. 383 (1844); Smith, Ill. Zool. S. Afr. pl. 106, fig. 2 (1849); Bp. Consp. i. p. 246 (1850); Mont. P. Z. S. 1865, p. 94; Layard, B. S. Afr. p. 216 (1867); Gray, Hand-l. B. ii. p. 120 (1870); Sharpe, Cat. Afr. B. p. 71 (1871); Gurney, in Anderss. B. Dam. Ld. p. 201 (1871); Buckley, Ibis, 1874, p. 383.

Certhilauda rufopalliata, Lafr. Mag. de Zool. 1836, Ois. pl. 59; Gray, Gen. B. ii. p. 383 (1844).

Certhilauda subcoronata, Smith, Ill. Zool. S. Afr. pl. 90. fig. 2 (1849); Bp. Consp. i. p. 246 (1850); Scl. P. Z. S. 1866, p. 23; Layard, B. S. Afr. p. 217 (1867); Gray, Hand-l. B. ii. p. 121 (1870).

Chersomanes subcoronata, Cab. Mus. Hein. Th. i. p. 126 (1850).

Alæmon rufopalliata, Licht. Nomencl. p. 39 (1854).

Certhilauda coronata, Layard, Ibis, 1869, p. 371.

Alanda semitorquata, Giebel, Thes. Orn. p. 300 (1872).

Alanda subcoronata, Giebel, Thes. Orn. p. 301 (1872).

Adult female in summer plumage. Above clear vinous brown, the head slightly darker, the hind neck somewhat tinged with ashy grey;

all the feathers of the upper surface distinctly streaked with blackish centres to the feathers, a little less plainly pronounced on the upper tail-coverts, but very distinctly on the upper wing-coverts; greater wing-coverts brown at base, broadly margined with rufous, rather lighter and more fulvescent than the back; primary coverts and quills ashy brown narrowly margined with rufous, the secondaries very broadly bordered, and the centres to these feathers shaded with clear grey; tail-feathers brown, narrowly margined with pale rufous, the centre ones shaded with grey, the outermost feather rather more broadly bordered than the other feathers, especially at the tip; from the nostril a distinct eyebrow, buffy white; lores also buffy white, slightly mottled with blackish; ear-coverts light rufous; cheeks and throat white, with a few scattered spots and tiny bars of black; rest of under surface isabelline fulvous, the flanks tinged with vinous; the breast broadly and distinctly streaked with black, becoming more obscure on the sides of the body and flanks, the under tail-coverts rather more rufescent, with dark brown centres to the feathers; under wing-coverts pale isabelline, excepting the small plumes near the edge of the wing, which are brown, with broad whitish edgings; inner lining of wing ashy brown, tinged with isabelline near base of inner web; "bill pale sienna-yellow, tinged with flesh-red, the upper mandible towards its base and its point shaded with pale reddish-brown; legs and toes pale sienna-yellow, tinted with flesh-red; claws brownish red; iris brown" (*Sir A. Smith*).

Total length 7·5 inches, culmen 0·8, wing 3·65, tail 3·35, tarsus 1·05.

The description is taken from a specimen collected by Mr. T. C. Atmore at Hope Town, which seems to be in full plumage. I have before me three other sexed females, of which I give the principal measurements:—

	Long tot. in.	culm. in.	al. in.	caud. in.	tars. in.
1. ♀, Hope Town (<i>T. C. Atmore</i>)..	7·3	0·75	3·75	3·2	1·05
2. ♀, Griqualand (<i>T. C. Atmore</i>)..	6·9	0·8	3·75	3·2	1·0
3. ♀, Objumbinque (<i>C. J. Andersson</i>)	6·9	0·8	3·7	3·05	1·1

The above measurements are sufficient to show how worthless are the small differences in size of bill and tarsus where Larks are concerned. The last specimen measured is in winter plumage; and this differs so much from the summer dress as almost to appear to belong to another species. It is much paler and more mealy than the plumage described; and the characters of the two seasonal dresses may thus be illustrated in a tabular form.

Female (summer).

Upper surface clear vinous brown, with distinct black stripes.

Female (winter).

Upper surface sandy isabelline, with fulvous margins to most of the dorsal feathers; head and interscapular region with small black shaft-stripes.

Hind neck indistinctly ashy grey.

Lower back and rump same as rest of upper surface, and streaked in the same manner.

Upper tail-coverts dark brown, with rufescent margins.

Upper wing-coverts and quills dark brown, with broad rufous margins.

Ear-coverts deep rufous, with slight fulvous shaft-streaks.

Cheeks and throat white, with a few black spots.

Under surface of body isabelline, with vinous tinge on flanks; breast broadly streaked with black.

Under wing-coverts deep isabelline vinous.

Hind neck decidedly ashy grey, contrasting with head.

Lower back and rump entirely uniform isabelline, with no shaft-streaks.

Upper tail-coverts light ash-colour, paler than the tail, and margined with whitish.

Upper wing-coverts and quills brown, broadly margined with pale sandy, shading off into white on the margins.

Ear-coverts very pale sandy.

Cheeks and throat pure white, unspotted.

Under surface of body white, with a few triangular spots of dusky black on the breast.

Under wing-coverts very pale isabelline sand-colour.

Male. Differs from the female in having a very much larger bill, and in being generally larger than his mate. This fact I can establish satisfactorily by five carefully sexed specimens shot by Mr. T. C. Atmore and the late Mr. Andersson. These are marked all males by their collectors, and measure as follows:—

	Total length. in.	culm. in.	wing. in.	tail. in.	tarsus. in.
1. ♂, Colesberg (<i>T. C. Atmore</i>)..	7.6	0.95	4.15	3.4	1.05
2. ♂, Eland's Post (<i>T. C. Atmore</i>)	7.2	0.9	4.1	3.25	1.1
3. ♂, Nonnberg (<i>T. C. Atmore</i>)..	8.0	0.95	4.25	3.6	1.15
4. ♂, Great Namaqua Land (<i>C. J.</i> <i>Andersson</i>)	7.8	0.95	4.4	3.5	1.1
5. ♂, Tjobis, Damara Land (<i>C. J.</i> <i>Andersson</i>)	7.9	..	4.35	3.45	1.15

A specimen (not sexed) collected in Benguela by Mr. Monteiro is also in the Musenm. It differs from any of the others before me in not having the vinous or isabelline tint clearly developed, the upper surface being ashy brown, with distinct shaft-lines. The under surface is entirely white, with a few small triangular streaks of blackish on the chest. It measures as follows:—Total length 7.2 inches, culmen 0.9, wing 3.95, tail 3.15, tarsus 1.05; and I think it is very probably a young bird.

It appears therefore from the foregoing measurements that the female averages from 3.65-3.75 inches in length of wing, and

0.75-0.8 in length of bill; while in the male the wing is 3.95-4.4 and the bill 0.9-0.95. It will be noticed that the three males last measured in the Table are very much bigger than the first two; but even these do not agree together in size of bill. The males numbered 1 and 2 agree with Mr. Monteiro's bird in having the bill much thinner than any of the others; but such a gradual gradation exists in the series that I do not see the necessity of creating another species, since the more I study Larks the more I find that size of bill goes for very little.

Hab. The northern parts of the Cape Colony, ranging over the whole of South Africa to Damara Land and Benguela.

Specimens examined.

Emus. Brit. :—*a.* South Africa (*Sir A. Smith**). *b.* ♂. Great Namaqua Land (*C. J. Andersson*). *c.* Benguela (*Monteiro*).

Emus. R. B. S. :—*a.*, *b.* South Africa (*E. L. Layard*). *c.*, *d.* ♀. Hope Town (*T. C. Atmore*). *e.* ♂. Colesberg (*T. C. Atmore*). *f.* ♂. Eland's Post (*T. C. Atmore*). *g.* ♂. Nonnberg (*T. C. Atmore*). *h.* ♀. Griqualand (*T. C. Atmore*). *i.* ♂. Tjobis, Damara Land, May 30, 1866 (*C. J. Andersson*). *k.* ♀. Objimbinque, May 30, 1866 (*C. J. Andersson*).

Emus. H. B. Tristram :—*a.*, *b.* ♂. Damara Land (*Andersson*).

5. *ALEMION NIVOSA.*

*Certhilauda nivos*a, Sw. B. W. Afr. i. p. 213 (1837); id. *Classif. B.* ii. p. 293 (1837).

Alauda albescens, Lafr. R. Z. 1839, p. 259; Giebel, *Thes. Orn.* p. 290 (1872).

Alauda guttata, Lafr. R. Z. 1839, p. 259.

Alauda codea, Smith, Ill. Zool. S. Afr. Aves, pl. 87. fig. 1 (1849, *ptil. hiem.*); Layard, B. S. Afr. p. 209 (1867); Sharpe, *Cat. Afr. B.* p. 72 (1871).

Alauda lagepa, Smith, Ill. Zool. S. Afr. Aves, pl. 87. fig. 2 (1849, *ptil. æstiv.*).

Megalophonus guttatus, Bp. *Consp.* i. p. 243 (1850); Layard, B. S. Afr. p. 215 (1867); Gray, *Hand-l. B.* ii. p. 123 (1870).

Megalophonus lagepa, Bp. *Consp.* i. p. 243 (1850); Layard, B. S. Afr. p. 214 (1867); Gray, *Hand-l. B.* ii. p. 122 (1870); Gurney, in *Anderss. B. Dam. Ld.* p. 200 (1872).

Galerita pyrrhonota, Bp. *Consp.* i. p. 245 (1850).

Calendulauda albescens, Blyth, J. A. S. B. xxiv. p. 258 (1855).

Megalophonus albescens, Gray, *Hand-l. B.* ii. p. 123 (1870).

Adult in summer plumage. Above brownish cinnamon, streaked with black down the shafts of the feathers, these shaft-streaks disappearing on the rump; hind neck with a scarcely perceptible shade of greyish, slightly distinguishable on the sides; wing-coverts and quills dark brown, margined with cinnamon-rufous, shading off into a fulvous edging on the extreme margin of the greater coverts and some of the secondaries, the innermost of which are more broadly

* Type of the species.

edged; upper tail-coverts rufous, with distinct blackish shaft-streaks; tail dark brown, with pale edgings of fulvous brown, the two centre feathers broadly and the two outermost narrowly margined with cinnamon-rufous; lores and a distinct eyebrow creamy buff; feathers in front of the eye blackish; under the eye another line of creamy-buff feathers; ear-coverts cinnamon; cheeks and throat dull white, varied with a few blackish spots; rest of under surface buffy white, slightly rufescent on the sides of the body, the fore neck and breast thickly spotted with dark brown, the spots becoming narrower and more longitudinal on the sides of the breast and flanks; thighs rufous; under tail-coverts white, the shafts rufous, the longest plumes rufous, with black shafts and a whitish tip; under wing-coverts ashy brown, like the inner lining of the wing; "bill light reddish brown, the lower mandible pale buff orange towards the base; legs and toes intermediate between broccoli and yellowish brown, and tinted with flesh-red; claws light reddish brown; iris bright brown; eyebrow rusty white" (*Sir A. Smith*). Total length 7 inches, culmen 0.7, wing 3.65, tail 3.8, tarsus 1.05.

Winter plumage. Entirely different from the summer dress. Above ashy grey, with a slight sandy-coloured tinge, the black central stripes broad but obscure, rather plainer on the middle of the back and scapularies, which are rather broadly margined with creamy white; wing-coverts dark greyish brown, with ashy margins to least series, the greater and median series broadly edged with whitish; quills dark brown, margined with ashy, the secondaries broadly edged with whitish; rump and upper tail-coverts rather more distinctly washed with sandy colour than the back, the latter with dark brown shaft-streaks; tail-feathers dark brown, the centre feathers shaded with greyish and plainly margined with ashy white, the outermost feathers having also a slight edging of the same; eyebrow and streak below the eye white; feathers in front of the latter blackish; ear-coverts uniform ashy grey like the back, but without dark shaft-streaks; hinder part of cheeks washed with ashy grey; fore part of cheeks and throat white, with an indistinct moustachial line of blackish spots; sides of neck and under-surface of body white, with triangular blackish spots from the lower throat to the breast, changing into longitudinal streaks on the sides of the breast and flanks and under tail-coverts; sides of the body inclining to greyish, as also the thighs; under wing-coverts and wing-lining entirely ashy brown; "bill, legs, toes, and claws deep orange-coloured brown, shaded with brownish red, the lower mandible towards the base sienna-yellow" (*Sir A. Smith*).

Considerable confusion exists in the synonymy of this Lark, principally due to the late Sir A. Smith. It will be seen that I unite his two species, *A. lagépa* and *A. codea*, into one, as I believe that they are nothing but the summer and winter plumage of the same bird. However curious this may seem, I think that it is not to be refuted on an examination of the specimens which I have before me. The Museum never obtained the type of *A. lagépa*

from Sir Andrew; but we have the type of his *A. codea*, without doubt the example described, but not the original of his figure, which, it will be seen, does not tally with the description at all. Luckily the very specimen figured is in the Museum, and I am enabled therefore to state that it is an example of *C. nivosa* of Swainson (*C. albescens*, Lafr.), which I consider to be nothing but the winter plumage of *A. lagépa*. Although not possessing the actual type of *A. lagépa*, we have specimens in the Museum which thoroughly agree with Smith's description and figure; and intermediate in plumage between true *A. lagépa* and *A. albescens* is the typical specimen of *A. codea*; while Mr. Layard's skins from the Berg River are also changing, in my opinion, from summer to winter. There is a gradual cinnamon tint pervading the whole grey upper plumage that leaves little doubt as to its changing ultimately into the full-plumaged *A. lagépa*. The ear-coverts are already light cinnamon.

The following are the measurements of the series examined:—

	Culm. in.	wing. in.	tail. in.	tarsus. in.
<i>a</i> , ad. hiem., S. Africa (<i>Smith</i>)	0·7	3·35	2·5	1·0
<i>b</i> , imm., S. Africa (<i>Smith</i>)	0·7	3·45	2·7	
<i>c</i> , ad. hiem., Capetown (<i>Butler</i>)	0·65	3·25	2·6	0·95
<i>d</i> , ad. hiem., Berg River (<i>Layard</i>)	0·7	3·35	2·5	0·95
<i>e</i> , ad. hiem., Berg River (<i>Layard</i>)	0·75	3·6	2·75	1·0
<i>f</i> , ad. æstiv., S. Africa (<i>Layard</i>)	0·7	3·65	2·8	1·05

This species does not seem to vary in size so much as some of the other South-African Larks. Specimens *e* and *f* have larger and appreciably thicker bills and are probably males, though Smith says that in the only male *A. codea* he obtained the bill was "considerably shorter than in adult females, more conical, and the culmen towards the point less curved."

Hab. Western parts of the Cape colony, ranging from Capetown to Little Namaqua Land.

Specimens examined.

E mus. Brit.:—*a*, ad. vix æstiv. South Africa (*Sir A. Smith*, type of *A. codea*). *b*, *c*, ♂ ♀ æstiv. Grootberg, Little Namaqua Land (*C. J. Andersson*). *d*, ad. hiem. Cape of Good Hope (*J. Gould*). *e*, ad. hiem. S. Africa (*Sir A. Smith*, specimen figured by him *l. c.*).

E mus. R. B. S.:—*a*, ad. æstiv. S. Africa (*E. L. Layard*). *b*, *c*, ♀ hiem. Berg River (*E. L. Layard*). *d*, ad. hiem. Capetown (*W. Butler*).

E mus. H. B. Tristram:—*a*. South Africa (*Layard*).

3. HETEROCORYS, gen. n.

The type of this genus is a rare bird, the *A. breviunguis* of Sundevall, which has the appearance of an *Alcemon*, and a similar nostril, this character separating it from *Ammomanes*, which it resembles in its long tarsus and in the proportions of its bill.

6. *HETEROCORYS BREVIUNGUIS*. (Plate LXXVI. fig. 1.)

Alauda breviunguis, Sund. Œfv. K. Vet. Akad. Förh. Stockh. 1850, p. 99; Giebel, Th. Orn. p. 292 (1872).

Certhilauda breviunguis, Bp. Consp. i. p. 246 (1850); Gray, Handl. B. ii. p. 121 (1870).

Megalophonus pyrrhonothus, Gray in Mus. Brit. et Handl. B. ii. p. 123 (1870).

Adult male (one of the typical specimens). Above rufous fawn-colour, the margins of the dorsal plumes paler and more fulvescent, with broad centres of blackish brown; the head slightly crested and coloured like the back, the hind neck more greyish and somewhat separating the head from the back by an indistinct collar; wing-coverts coloured like the back, dark brown, with broad fulvescent margins, causing a somewhat mealy appearance; quills brown, margined with fulvous fawn-colour, very broad on the secondaries, and paler on the outer edges; lower back, rump and upper tail-coverts bright rufous fawn-colour with narrow blackish shaft-lines, broader on the last named; tail-feathers brown, bordered with fulvous, a little broader on the outermost feather and more rufous on the centre ones, which are shaded with ashy; lores and a distinct eyebrow fulvous white, tinged with fawn; ear-coverts rufous fawn, inclining to dark brown on their upper margin; cheeks fulvous white, with a few spots of dark brown; under surface of body isabelline buff, the throat unspotted; the flanks and chest washed with fawn-colour, the latter marked with a good many triangular spots of dark brown; under wing-coverts light fawn-colour, the outermost spotted with brown, the greater series ashy brown, like the inner lining of the wing, which is almost entirely of the latter colour, with a tinge of isabelline on the inner web; bill horn-brown, inclining to yellowish horn-colour at base. Total length 6·8 inches, culmen 0·8, wing 4·0, tail 3·1, tarsus 1·1.

Hab. Caffraria to the Transvaal.

Specimens examined.

E mus. Brit.:—*a*, *b*. South Africa (*Sir A. Smith*).

E mus. R. B. S.:—*a*, ♂. Transvaal, April 16th, 1844 (*Wahlberg*).

4. *AMMOMANES*.

Type.

Ammomanes, Cab. Mus. Hein. i. p. 125 (1850) . . . *A. pallida*.

The characters given in the synopsis define the relations of this genus, in which a system of uniform dorsal coloration appears to be a point of no small generic significance.

Key to the species.

- a*. Larger; ear-coverts fawn-colour or rufous; tail without white tips to the inner webs.
 - a'*. Inner lining of wing lead-coloured, with no perceptible lighter shade on inner web of primaries 7. *ferruginea*.
 - b'*. Inner lining of wing pale ashy, with the inner webs of the primaries inclining to isabelline 8. *erythrochlamys*.
- b*. Smaller; ear-coverts whitish or slightly washed with isabelline; tail tipped with white spots on inner webs of the feathers 9. *grayi*.

7. AMMOMANES FERRUGINEA.

Alauda ferruginea, Lafr. R. Z, 1839, p. 258; Smith, Ill. Zool. S. Afr. Aves, pl. 29 (1847); Layard, B. S. Afr. p. 208 (1867).

Megalophonus ferrugineus, Bp. Consp. i. p. 244 (1850); Gray, Hand-l. B. ii. p. 122 (1870).

Adult (type of species). Above uniformly deep vinous cinnamon, the head coloured like the back and showing no pronounced grey shade on the hind neck; least wing-coverts uniform with the back, inasmuch as the brown bases to the feathers are concealed; median and greater coverts dark brown, margined with cinnamon shading off into yellowish buff on the extreme edge of the feathers; quills light brown, with ashy fulvous edges, the secondaries more broadly margined, with cinnamon shading into whitish on extreme edges, especially the innermost, where the cinnamon colour occupies the greater part of the feather, leaving the centre of it only longitudinally brown; rump vinous cinnamon, the upper tail-coverts rather inclining to brownish cinnamon, resembling the centre tail-feathers, which are longitudinally brownish down the centre, and by no means so bright cinnamon as the back; rest of the tail-feathers very dark brown, narrowly edged with cinnamon buff, a little more broadly on the penultimate feather, and very distinctly on the outermost, where the rufescent margin occupies more than half of the outer web; lores and feathers under the eye dull white, as well as an ill-defined eyebrow; ear-coverts uniformly cinnamon; cheeks, throat, and sides of neck whitish, the former slightly spotted with blackish forming an indistinct moustache; rest of under surface creamy white, shading into ashy-rufous on the flanks and thighs, the sides of the upper breast rufous; lower throat and breast very distinctly marked with blackish spots, those on the former triangular, gradually becoming more longitudinal on the breast, and disappearing on the sides of the body, many of the longitudinal streaks washed with rufous; under wing-coverts and inner lining of wing almost uniformly ashy or leaden brown, the innermost secondaries washed with rufous on inner web; some of the under wing-coverts with indistinct whitish edgings; under tail-coverts creamy-white washed with cinnamon towards the tips of the middle ones; "bill dark yellowish brown, passing towards the base of the lower mandible into dusky yellow; feet and claws light yellowish brown; eyes dark brown" (*Sir A. Smith*). Total length 7.5 inches, culmen 0.7, wing 4.1, tail 3.2, tarsus 1.2.

Hab. "The extensive arid plains to the southward of the Orange River" (*Smith*). Of this species I have only seen a single specimen, the type, now preserved in the Museum. Sir Andrew Smith seems to have procured more, as he writes of the female that she has the ground-colour "not quite so bright as in the male; and the brown streaks on the breast are less distinct;" nor does he appear to have looked upon it as a scarce bird.

Specimens examined.

E mus. Brit. :—a, ♂ ad. South Africa (*Sir A. Smith*, type of species).

8. AMMOMANES ERYTHROCHLAMYS.

Alauda erythrochlamys, Strickl. Contr. Orn. 1852, p. 151; Gray, Hand-l. B. ii. p. 118 (1870); Sharpe, Cat. Afr. B. p. 72 (1871); Gurney in Anderss. B. Dam. Ld. p. 194 (1872).

Megalophonous erythrochlamys, Ayres, Ibis, 1874, p. 103, pl. iii. fig. 2.

Adult male in winter plumage. Above uniform pale fawn-colour, with indistinct shaft-stripes of dull rufous on some of the feathers of the head and back; wing-coverts pale fawn, like the back, but with pale yellowish buff margins to the feathers; quills pale brown, broadly margined with fawn-colour, the secondaries more broadly, the innermost being coloured like the wing-coverts and margined in the same manner with yellowish buff; tail dark brown, narrowly margined with fulvous fawn-colour, occupying the entire outer web of the last tail-feathers, and running round the tip and up the margin of the inner web of this and the penultimate feather; the two centre feathers bleached fawn-colour, paler than the back; lores, feathers below and above the eye, forming an eyebrow, and cheeks white, the ear-coverts pale fawn-colour like the back; under surface of body creamy white, washed with fawn-colour on the sides of the body, the chest spotted with triangular markings of pale brown; thighs pale fawn; under tail-coverts creamy white; under wing-coverts buffy whitish, the greater series pale ashy brown, the outer plumes fawn-coloured; inner lining of wing also pale ashy brown, inclining to pale fawn-colour at base of inner web. Total length 6·5 inches, culmen 0·75, wing 3·6, tail 2·8, tarsus 1·05.

Summer plumage. The summer dress is different from the winter, and is of much rarer occurrence in collections; indeed I have only seen one example, the one figured by Mr. Ayres (*l. c.*), which differs in the following particulars:—

a. In being deeper cinnamon above, the quills and coverts all being edged with the same dark colour.

b. In having the tail broadly edged and tipped with cinnamon rufous, the outermost feathers not paler-margined, the two centre ones being almost entirely cinnamon, with a broad streak of greyish black down the middle.

c. In having a greyish shade on the hind neck, which is not seen in the winter dress.

d. In having the lores, eyebrow, sides of face and underparts generally washed with yellowish; and

e. In having more numerous and more distinct brown spots on the chest.

Young. Appears to differ from the adult only in having a few whitish tips to the feathers of the head and scapulars, the wing-coverts and quills being also much paler-edged.

Hab. From the Transvaal (summer) to Damara Land (winter).

This species is very closely allied to *A. ferruginea*, from which it differs in its smaller size and slightly more vinous cinnamon-colour. The female differs from the male in having a thinner and more slender bill; but the males do not seem to approach *A. ferruginea*; nor does

the wing quite agree, as will be seen by comparing the wing of *A. erythrochlamys* with that of that species.

The first primary in *A. ferruginea* is much bigger, and the distance between its tips and the tip of the second primary is 1·5 inch, whereas in *A. erythrochlamys* it measures 1·35—4 inches; but even this varies a good deal, and the best difference between the two species lies in the larger size and greyish flanks of *A. ferruginea*.

The series now before me measure as follows:—

	Total length. in.	culm. in.	wing. in.	tail. in.	tarsus. in.
a, ♀ ad., Transvaal (<i>Ayres</i>) ..	6·8	0·7	3·5	2·8	1·05
b, ♀ ad., Damara (<i>Wahlberg</i>)	6·5	0·65	3·4	2·8	1·05
c, ♂ juv. ,, (<i>Andersson</i>)	6·5	0·7	3·3	2·7	1·05
d, ♂ ad. ,, ,,	6·8	0·75	3·55	2·9	1·15
e, ♂ ad. ,, ,,	6·5	0·75	3·6	2·8	1·05

Compare with the above the dimensions of *A. ferruginea*.

	Total length. in.	culm. in.	wing. in.	tail. in.	tarsus. in.
a, ad. South Africa (<i>Sir A. Smith</i>)	7·5	0·7	4·1	3·3	1·25

Specimens examined.

E mus. Brit.:—a, b, ad. Walvisch Bay, Damara Land (*C. J. Andersson*).

E mus. R.B.S.:—a, ♂ juv. Walvisch Bay, Damara Land, May 26th, 1864 (*C. J. Andersson*). b, ad. Damara Land (*C. J. A.*). c, ♀ ad. Damara Land, Nov. 20th, 1854 (*Wahlberg*).

E mus. J. H. Gurney:—a, ♀ ad. Potchefstroom, Transvaal, June 20th, 1872 (*T. Ayres*).

E mus. H. B. Tristram:—a, ♀. Walvisch Bay, Jan. 27th, 1864 (*C. J. Andersson*).

9. AMMOMANES GRAYI. (Plate LXXVI. fig. 2.)

Alauda Grayi, Wahlb. Œfv. K. Vet. Akad. Förh. Stockh. 1855, p. 213; id. J. f. O. 1857, p. 2; Gray, Hand-l. B. ii. p. 118 (1870); Sharpe, Cat. Afr. B. p. 71 (1871); Gurney in Andersson, B. B. Dam. Ld. p. 193 (1872).

Alauda nævia, Chapm. Trav. S. Afr. App. p. 400 (1868).

Adult male. Above light sandy isabelline, not paler on the head, but slightly fulvescent on the hind neck; forehead, lores, and a tolerably defined eyebrow whitish; feathers in front of the eye dusky blackish; sides of face whitish, the hinder ear-coverts washed with isabelline; entire under surface of body whitish, slightly washed with isabelline on the breast, on each side of which is an indistinct blackish patch; under wing-coverts white, with a very faint isabelline tinge; upper wing-coverts sandy isabelline like the back, with light whitish margins, mottled also by means of the grey bases to the feathers showing; quills greyish, slightly tipped with

white and margined with saudy colour on the outer web, the primaries very narrowly bordered, but the secondaries very broadly, the innermost being entirely rufous sand-colour, with broad longitudinal greyish centres, the inner lining of the wing greyish, inclining to white near the base of the inner web; tail dark brown tipped with white on the inner web, the centre feathers grey, with sandy-coloured margins and tips, the basal third of the tail-feathers isabel-line inclining to whitish, and extending further up the outer web of the external feathers. Total length 4·8 inches, culmen 0·65, wing 3·25, tail 1·8, tarsus 0·85.

Adult female. Similar to the male, but rather smaller in the wing. Total length 4·8 inches, culmen 0·6, wing 3·05, tail 1·8, tarsus 0·85

Hab. Damara Land.

Specimens examined.

E mus. Brit. :—*a.* Damara Land (*C. J. Andersson*).

E mus. R. B. S. :—*a, b, ♂ ♀.* Oosop, Damara Land, Nov. 30 and Dec. 2, 1866 (*C. J. Andersson*). *c.* Sand Fountain, Walvisch Bay, April 19, 1865 (*C. J. A.*).

E mus. H. B. Tristram :—*a, ♂.* Oosop, Damara Land, Nov. 30, 1866 (*C. J. A.*).

Genus 5. ALAUDULA.

Alaudula, Horsf. & Moore, Cat. B. Mus. E. I. Co. ii. Type.
p. 471 (1856, *ex Blyth MS.*)..... *A. raytal*.

Confined to the Indian peninsula, and not represented in Africa.

Genus 6. RHAMPHOCORYS.

Type.

Rhamphocorys, Bp. C. R. xxxi. p. 423 (1850) *R. clot-bey*.
Ierapterhina, Desmurs et Lucas, Rev. et Mag. de
Zool. 1851, p. 24 *R. clot-bey*.

Appears to be rather an exaggerated *Ammomanes*, and not to have any great affinity with *Melanocorypha*.

Genus 7. ALAUDA.

Type.

Alauda, Linn. S. N. i. p. 287 (1766) *A. arvensis*.

Genus 8. CALANDRELLA.

Type.

Calandrella, Kaup, Natürl. Syst. p. 39 (1829) *C. brachydactyla*.
Coryphidea, Blyth, J. A. S. B. xiii. p. 960
(1844) *C. brachydactyla*.
Calandritis, Cab. Mus. Hein. Th. i. p. 122
(1850) *C. brachydactyla**.

Differs from *Alauda* chiefly in its thicker bill, otherwise very closely allied. Distinguished by larger and more sharply pointed wings.

* I presume, from the general references of ornithologists, that the type of *Calandritis* is the Short-toed Lark, as Cabanis proposed to supersede with this term the unclassical titles of Kaup and Blyth; but were the first species mentioned of each genus to be regarded as the type, then *A. cinerea* would be the type of *Calandritis*, which would thus supersede my genus *Tephrocorys* (*vide infra*, p. 633).

Genus 9. SPIZOCORYS.

Type.

Spizocorys, Sundev. Av. Tent. p. 55 (1873) *S. conirostris*.

Remarkable for its minute first primary, which escaped the observation of Professor Sundevall. Wings very much rounded, the primaries and secondaries nearly equal.

10. SPIZOCORYS CONIROSTRIS.

Alda conirostris, Sundev. Œfv. K. Vet. Akad. Förh. Stockh. 1850, p. 99; Bp. Consp. i. p. 244 (1850); Gray, Handl. B. ii. p. 118 (1870); Sharpe, Cat. Afr. B. p. 72 (1871); Gurney, in Anderss. B. Dam. Ld. p. 192 (1872); Ayres, Ibis, 1874, p. 103, pl. iii. fig. 1.

Coraphites conirostris, Licht. Nomencl. Av. p. 39 (1854).

Calandrella, sp., Bocage, Journ. Lisb. i. p. 152 (1867).

Calandritis minor, Bocage, op. cit. ii. p. 351 (1869).

Spizocorys conirostris, Sundev. Av. Tent. p. 55 (1873).

Adult female (one of the typical specimens). Above fulvous brown, the feathers of the head and back blackish down their centres, which are very broad, the margins being sandy, more or less inclining to deeper rufous; all the plumes of the hind neck, rump, and upper tail-coverts, as well as a few of the dorsal feathers, broadly margined with greyish, producing a distinct ashy appearance; wing-coverts brown, broadly margined with sandy buff, the lesser and median series so broadly as nearly to obscure the dark brown centres to the feathers, the greater coverts with a slight greyish shade on their outer margins; quills lighter brown, with a slight ashy shade, the feathers margined with sandy buff, paling on the extreme edge of the feather, the outer edge of the first primary sandy white for nearly the entire length of the quill; tail blackish, tipped with dull white, with ashy fulvous margins, broader on the centre feathers, which are paler and nearly uniform brown, the two outer feathers margined with sandy buff, occupying part of the inner web and the tip of the outermost; a distinct line of white over and under the eye, with a small patch of blackish feathers in front of the latter; ear-coverts brown, blackish on upper margin; cheeks white, washed with pale brown on hinder margin, and spotted with black, a narrow line of which runs from the gape to the ear-coverts; throat pure white, with a few black spots on lower portion; rest of under surface of body sandy rufous, paler and more fulvous on the lower abdomen, the fore neck and chest rather largely spotted with triangular spots of blackish brown; under wing-coverts sandy buff, the lower series inclining to ashy, and resembling the inner lining of the wing. Total length 4·7 inches, culmen 0·5, wing 3·0, tail 1·75, tarsus 0·75.

Eight specimens of this pretty little Lark are before me, as enumerated below; and I appear to have the extremes of summer and winter plumage, with intermediate grades. For the determination of the species I describe one of the typical specimens in my own collection, received in exchange from the Stockholm Museum; but Mr. Gurney owns an example in still fuller plumage, the specimen

figured (badly) in 'The Ibis' for 1874 (p. 103). The general colour of this bird above is reddish sand-colour, varied with black centres to the feathers; and the under surface is likewise deep sandy rufous with white throat and triangular chest-spots (wing 3·0). This specimen was shot at Potchefstroom by Mr. Ayres, on the 16th of June, 1872, and is a female. Another female, killed by Mr. Andersson at Ondonga on the 1st of November, 1867, is in what I take to be the winter dress of the bird. The general colour is a sandy buff, with no rufous tinge to speak of, but with narrow blackish centres to the feathers; and the under surface is buffy white tinged with sandy rufous on the chest, which is streaked with narrow little spots of blackish brown: the throat and sides of the face are white, with a blackish malar stripe forming an indistinct moustache. I think there can be no doubt of this being the winter plumage of *A. conirostris*. The difference of being more mealy is usual in the winter dress of Larks; and the proportions fairly agree (wing 2·85, tarsus 0·75). Two male specimens are in my own collection from the Hountop River, Great Namaqua Land, shot by Mr. Andersson on the 3rd of June, 1862. These birds are intermediate between the winter and summer specimens described. They are rather mealy in appearance; but the dark centres to the feathers of the upper surface are becoming somewhat pronounced, and several of the dark chest-spots are developing, appearing as if the summer plumage were gained by the wearing-off of the sandy margins. These birds have the wing 2·9–3·0 inches, and the tarsus 0·75.

The white on the outer tail-feathers varies very much in extent. In this young specimen it occupies the outer web and half of the inner one, as it does also in Wahlberg's Transvaal skin and the Ondonga female; but in the full-plumaged bird in Mr. Gurney's collection, and in both the Namaqua examples the sandy white is confined to the outer web and forms a narrow margin to the tail.

Young. Above dark brown, the feathers washed with sandy colour and tipped with white; the hind neck inclining to ashy grey, the white tips almost imperceptible; wing-coverts dull brown margined with sand-colour and ending in a white tip; quills and tail much as in adult, but inclining to whitish at the tips of the feathers; lores dusky blackish; sides of face nearly uniform brown, with a blackish streak running along the upper margin of the ear-coverts and down the cheeks; under surface pale isabelline, the throat spotted with dusky, and having on each side a moustachial streak of the same, the breast inclining to sandy brown on the sides and obscurely spotted with dusky.

Hab. Caffraria, and the Transvaal (summer) to Damara Land (winter).

Specimens examined.

E. mus. *Brit.*:—*a*, ad. Near Wilson's Fountain, Damara Land (*C. J. Andersson*). *b*, *c*, ♂. Hountop River, Great Namaqua Land, May 27, 1862 (*C. J. A.*).

E. mus. *R. B. S.*:—*a*, ♀ ad. Transvaal (*Wahlberg*). *b*, ♂ ad.

Objimbinque, Damara Land, June 20, 1866 (*C. J. A.*). c, ♀. Ondonga, Ovampo Land, November 1, 1867 (*C. J. A.*).

E mus. J. H. Gurney:—a, ♀. Potchefstroom, Transvaal, June 16, 1872 (*T. Ayres*).

E mus. H. B. Tristram:—a, ♀. Transvaal, May, 1870 (*T. Ayres*).

10. TEPHROCORYS, gen. n.

11. TEPHROCORYS CINEREA.

La Cendrille, Buff. H. N. Ois. v. p. 64.

Cinereous Lark, Lath. Gen. Syn. ii. pt. 2, p. 388 (1783).

Alauda cinerea, Gm. S. N. i. p. 798 (1788, ex Lath.); *Scl. P. Z. S.* 1866, p. 23; Sharpe, *Cat. Afr. B.* p. 71 (1871); Giebel, *Thes. Orn.* p. 293 (1872); Buckley, *Ibis*, 1874, p. 383.

La petite Alouette à tête rousse, Levaill. Ois. d'Afr. iv. p. 199 (1800); Sundev. *Crit. om Levaill.* p. 46 (1857).

Megalophonus cinereus, Gray, *Gen. B.* ii. p. 382 (1844); Bp. *Consp. i.* p. 244 (1850); Layard, *B. S. Afr.* p. 212 (1867); Ayres, *Ibis*, 1869, p. 295; Gray, *Hand-l.* ii. p. 122 (1870); Gurney in Anderss. *B. Dam. Ld.* p. 197 (1872).

Calandritis cinerea, Cab. Mus. Hein. i. p. 123 (1850).

Alauda spleniata, Strickl. *Orn. Syn.* 1852, p. 152.

Calandrella cinerea, Licht. *Nomencl. Av.* p. 39 (1854); Gurney, *Ibis*, 1864, p. 353.

Megalophonus anderssoni, Tristr. *Ibis*, 1869, p. 434, et 1870, p. 444; Gurney, in Anderss. *B. Dam. Ld.* p. 198.

Adult male. Above ashy, mottled with dark brown centres to the feathers, some of the dorsal plumes washed with sandy colour; crown of head bright chestnut, forming a cap, some of the feathers slightly margined with fulvous; hind neck decidedly ashy, paler than the back and forming a kind of collar; wing-coverts ashy brown, with broad fawn-coloured margins, forming a conspicuous shoulder-patch; the greater and primary coverts ashy brown, with ashy-fulvous edgings; quills dark brown, margined with ashy fulvous, inclining to rufous near the base of the feathers; the outer primary with a broad external margin of creamy white; upper tail-coverts rufous fawn-colour, the longest shaded with brown down the middle; tail-feathers dark brown, the penultimate and outer feather edged with white occupying the whole external web of the latter; the two centre tail-feathers margined with ashy brown; small frontal plumes whitish; lores and a distinct eyebrow white, as also the feathers under the eye and the cheeks white, the latter slightly spotted with brown; ear-coverts pale rufous; sides of neck clear ashy grey; throat white; rest of under surface also white; the middle of the breast ashy fulvous; the sides of the upper breast bright chestnut, forming a patch on both sides; sides of body inclining to ashy fulvous, washed with fawn-colour on the lower flanks; thighs ashy fulvous; under wing-coverts pale ashy grey; the edge of the wing fulvous white; inner lining of wing ashy brown, the inner webs of the quills slightly rufescent towards the base; "bill yellowish brown;

legs and toes brownish or reddish brown ; iris dark brown " (*C. J. Andersson*).

Total length 6·2 inches, culmen 0·55, wing 3·9, tail 2·7, tarsus 0·85.

Adult female. Coloured like the male. Total length 6·2 inches, culmen 0·5, wing 3·65, tail 2·6, tarsus 0·85.

The description is taken from a pair of birds collected and sexed by my friend Mr. Ayres. They are both, I take it, in full winter plumage ; and I regret that I have the dates of scarcely any of my specimens, which makes it difficult to determine the seasonal changes of the species. Two examples, however, now before me differ sufficiently in their coloration to make me believe that they are in their breeding-dress ; and I therefore give the following short notes on this plumage :—General colour more rufous than in winter, especially on the upper tail-coverts and crown, the latter being deep chestnut and the patches on the sides of the breast much larger and extending farther down the sides of the body, the centre of the chest being also washed with rufous.

Young. Above blackish, some of the feathers washed with sandy colour, but all of them terminally spotted or edged with creamy white, producing a pretty and variegated appearance ; hind neck greyish mottled with dark brown and spotted with creamy white ; head blackish varied with sandy rufous bases to the feathers and spotted with creamy white ; lores and a broad eyebrow whitish, as also the sides of the face, which have, however, a mark of brown on the cheeks under the eye, while the ear-coverts are dark brown washed with rufous and spotted minutely with creamy white ; under surface whitish, the breast and sides of body mottled, with dark brown bases to the feathers, inclining to rufous on the sides of the breast ; under wing-coverts whitish ashy ; quills brown broadly margined with rufous, the outer web of external primary fulvous white, the inner secondaries broadly edged with whitish ; rump and upper tail-coverts bright fawn-colour spotted with white, before which is a subterminal spot of dark brown ; tail blackish brown, the outermost feather white on the outer web, crossing the inner one obliquely near the tip, the two centre feathers rufous near the base and margined with whitish towards the tip.

Hab. Cape colony to the Transvaal and thence to Damara Land, where, however, the size is rather smaller (*vide infra*).

Canon Tristram has very kindly sent me the whole of his collection of Larks for examination ; and among them I find the type of his *Megalophonus anderssoni*. I am sorry I cannot indorse this bird as a good species ; for it is assuredly the *Alauda spleniata* of Strickland, and I cannot see in it any more than a small subtropical form of *Tephrocorys cinerea* ; and as such it would bear the title of *Tephrocorys spleniata*. The specimen identified as *C. anderssoni* by Mr. Blandford, which bears the handwriting of Canon Tristram, seems to me to be merely *C. ruficeps* in winter plumage (*cf.* Blandf. Geol. & Zool. Abyss. p. 389).

The specimen in Canon Tristram's collection measures as follows—

total length 5 inches, culmen 0·45, wing 3·15, tail 2·15, tarsus 0·8. I do not, however, believe that it has got its perfect plumage, the tail being still in full moult.

Specimens examined.

Emus. Brit.:—*a*, ad. South Africa (*Sir A. Smith*). *b*, *c*. Cape of Good Hope. *d*, ♂ ad. Cape Town, Sept. 24, 1866 (*C. J. Andersson*).

Emus. R. B. S.:—*b*, ad. South Africa (*Layard*). *c*, ad. Colesberg (*D. Arnot*). *d*, juv. Graham's Town (*E. L. Layard*). *e*, *f*, ♂ ♀ ad. Transvaal (*T. Ayres*).

Emus. H. B. Tristram:—*a*. South Africa (*Layard*). *b*. Cape colony (*Andersson*). *c*. Natal (*Ayres*). *d*, ♀? Objimbinque, Damaraland, March 13th, 1865 (*C. J. Andersson*).

11. MELANOCORYPHA.

Type.

Melanocorypha, Boie, Isis, 1828, p. 322 *M. calandra*.
Calandra, Less. Compl. Buff. ii. p. 120 (1837) .. *M. calandra*.
Londra, Sykes, P. Z. S. 1838, p. 114 *M. calandra*.
Corydon, Gloger, Handb. Naturg. p. 264 (1842,
nec Less. 1828) *M. calandra*.
Calandrina, Blyth, J. A. S. B. xxiv. p. 265 (1855) *M. torquata*.

The thickset conical bill is one of the chief characters of the genus. Wings moderately pointed.

12. PALLASIA.

Type.

Pallasia, E. von Homeyer, J. f. O. 1873, p. 190.. *P. mongolica*.

Remarkable for its short secondaries, which must make it conspicuously different in flight from other Larks.

13. LULLULA.

Type.

Lullula, Kaup, Natürl. Syst. p. 92 (1829) *L. arborea*.

Corys, Reich. *L. arborea*.

Not far removed from *Alauda*, but differing in the curved hind claw, and long first primary.

14. GALERITA.

Type.

Galerida, Boie, Isis, 1828, p. 321. *G. cristata*.

Heterops, Hodgs. in Gray's Zool. Misc. p. 84 (1844) *G. cristata*.

Often united by naturalists to *Lullula* and *vice versa*. The two genera, however, appear to me well characterized, the wing-formula and shape of crest being quite different.

15. PYRRHULAUDA.

Type.

Pyrrhulauda, Gray, Gen. B. ii. p. 381 (1844)* .. *P. australis*.

Megalotis, Sw. Zool. Journ. iii. p. 347 (1827) (*nec*
 Ill.) *P. leucotis*.

Coraphites, Cab. Arch. f. Naturg. xiii. p. 328 (1847) *P. australis*.

* Said by Gray to have been established by Sir A. Smith in 1829. Smith also states the same; but I cannot find where he proposed the genus.

16. CALENDULA.

Type.

Calendula, Sw. Classif. B. ii. p. 292 (1837) .. *C. crassirostris*.
Erana, Gray, List Gen. B. p. 48 (1840) *C. crassirostris*.

Distinguished by its stout and *Calandra*-like bill, but otherwise much resembling *Alauda* in appearance, though of course the development of the first primary separates them at once.

12. CALENDULA CRASSIROSTRIS.

Alouette à gros bec, Levaill. Ois. d'Afr. iv. pl. 193 (1805); Sundev. Crit. om Lev. p. 46 (1857).

Alauda crassirostris, Vieill. N. Dict. d'Hist. Nat. i. p. 373 (1816); id. and Bonn. Enc. Méth. i. p. 323 (1823); Gray, Gen. B. ii. p. 380 (1844); Layard, B. S. Afr. p. 208 (1867); Gray, Hand-l. ii. p. 119 (1870); Sharpe, Cat. Afr. B. p. 71 (1871).

Alauda magnirostris, Steph. Gen. Zool. xiv. p. 27 (1826).

Melanocorypha crassirostris, Boie, Isis, 1828, p. 322.

Calendula magnirostris, Sw. Classif. B. ii. p. 292 (1837).

Megalophonus crassirostris, Bp. Consp. i. p. 243 (1850).

Galerita crassirostris, Licht. Nomencl. p. 39 (1854).

Calendula crassirostris, Gurney in Anderss. B. Dam. Ld. p. 195 (1872).

Ammomames crassirostris, Sundev. Av. Tent. p. 54 (1872).

Adult. Above dark brown, the feathers tolerably broadly margined with sandy fulvous, getting lighter on the extreme edge of the feather; the lower back and rump ashy brown, more uniform, or having only a few central streaks of dark brown on the lower back; head rather lighter brown than the rest of the upper surface, the dark brown central streaks rather narrower; hind neck inclining to ashy fulvous and minutely streaked with dark brown; wing-coverts dark brown, somewhat shaded with ashy and rather broadly margined with sandy fulvous on the median and lesser coverts, the greater series margined with ashy, but without such distinct edges of sandy buff as the other series; quills brown, narrowly tipped and margined on the outer web with sandy white, the secondaries distinctly shaded with grey; upper tail-coverts ashy brown shaded with sandy and streaked with dark brown down the centres of the longest feathers; tail-feathers dark brown margined with ashy grey, the penultimate feather narrowly, and the outermost a little more broadly margined and tipped with sandy white or fulvous; lores, feathers above and below the eye, as well as a streak running along the sides of the crown fulvous white, but not forming a distinct eyebrow; cheeks fulvous white, minutely spotted with blackish brown; ear-coverts dark brown streaked with sandy buff; under surface of body dull yellowish white, the throat very slightly spotted with blackish brown, of which colour there is a moustachial line on each side; the breast thickly and distinctly streaked with blackish brown, gradually narrowing on the lower breast and sides of abdomen to hair-like lines; belly, vent, and under tail-coverts unspotted; flanks ashy brown streaked with dark brown; under wing-coverts pale

ashy brown narrowly margined with sandy white, the outer feathers near the bend of the wing sandy white spotted with brown, the centres of the feathers being of this colour; "upper mandible horn-colour, the lower one buff shading into dark horn-colour towards the tip; legs pale brown; iris brown" (*Shelley*). Total length 6·8 inches, culmen 0·75, wing 4·0, tail 2·75, tarsus 1·0.

Young. Duller and more uniform brown than the adult, with whitish edgings to the feathers of the crown, ear-coverts, and wing-coverts, the greater series of the latter with sandy rufous margins; quills brown, paler towards the tips, and margined with sandy rufous paling into whitish buff towards the tips of the secondaries; under surface of body white, the breast streaked with blackish brown; each feather narrowly margined with whitish.

Winter plumage. Duller and more ashy brown than in summer, all the feathers obscured with greyish margins; underneath more yellowish, the spots on the breast duller and paler brown, and not nearly so largely developed.

Hab. The Cape colony, ranging into the eastern districts, and northwards into Little Namaqua Land.

As in the other South-African Larks, great variation in size of bill exists in the present species; and the want of carefully sexed specimens prevents my accounting for these differences; but the males seem to be rather larger, to judge from the following measurements, the only ones in which I have any guide to the sexes.

	Total length.	wing.	tail.	tarsus.
<i>a</i> , ♀ ad. Stellendorf (<i>G. E. Shelley</i>).	7·0 *	3·8	2·75	1·0
<i>b</i> , ♂ ad. Little Namaqua Land (<i>Andersson</i>)	6·8	3·95	2·85	0·98

Captain Shelley recently collected two birds in the Cape colony, towards the end of January. They appear to be young birds, in their first winter plumage, from which they are just emerging by a moult; but on the head the feathers have sandy-coloured margins. The new feathers are much richer brown, almost black in the centre, with rufescent margins; but these gradually get bleached in time.

Specimens examined.

E mus. Brit.:—*a*. S. Africa. *b*, *c*. Cape. *d*, ♀ ad. S. Africa (*Sir A. Smith*). *e*. S. Africa (*Andersson*).

E mus. R. B. S.:—*a*, ad. South Africa (*Layard*). *b*, juv. S. Africa (*Layard*). *c*, ♂ ad. Little Namaqua Land, July 29th, 1862 (*Andersson*). *d*, *e*, ♂ ♀ ad. Hope Town (*T. C. Atmore*).

E mus. G. E. Shelley:—*a*. Ceres, Cape colony, Jan. 28, 1874 (*G. E. S.*). *b*, ♀ ad. Stellendorf, Cape colony, Jan. 23, 1864 (*G. E. S.*).

E mus. H. B. Tristram:—*a*. South Africa (*Layard*).

17. MIRAFA.

Type.

Mirafra, Horsf. Tr. Linn. Soc. xiii. p. 159 (1820) *M. javanica*.

* In the flesh; 6·5 in skin.

<i>Brachonyx</i> , Sw. Zool. Journ. iii. p. 344 (1827, nec Schönh. 1826)	Type. <i>M. apiata</i> .
<i>Corypha</i> , Gray, List Gen. B. 1840, p. 48.	<i>M. apiata</i> .
<i>Megalophonon</i> , Gray, List Gen. B. 1841, p. 62 . .	<i>M. apiata</i> .
<i>Plocealauda</i> , Hodgs. in Gray's Zool. Misc. p. 84 (1844).	<i>M. assamica</i> .
<i>Geocoraphus</i> , Cab. Arch. f. Nat. xiii. p. 328 (1847)	<i>M. javanica</i> .

Distinguished by its open nostrils, which are devoid of the usual bristles. Having never met with the type of the genus (*M. javanica*), I have only been able to compare the Flores species, *M. parva*, of Swinhoe. The African species have, as a rule, rather thinner bills and fuller crests; but at present I follow Prof. Sundevall in placing them in *Mirafra*.

Key to the Species.

- a. Tail varied with zigzag spots and bars of black.
 - a'. General colour grey; primaries brown, edged with rufous, which does not, however, pass across the base of *both* webs. *apiata*.
 - b'. General colour rufous; quills broadly margined with rufous, which at the same time occupies the basal half of both webs. *rufipila*.
- b. Tail uniform, with rufous edgings to the centre feathers.
 - c'. Inner web of the quills rufous, as also the outer web of the primaries, making the entire base of the quills rufous, excepting the brown shaft.
 - a". Larger; with a conspicuous rufous nape-patch, contrasting with the rest of the upper surface, which is brown, with darker centres to the feathers. *africana*.
 - b". Smaller; no nape-patch, the nape being the same as the head and back.
 - a"". General colour grey, with brown shaft-streaks; tail-feathers edged and tipped with white. *damarensis*.
 - b"". General colour fawn, with brown shaft-stripes; tail-feathers margined with rufous. *africanoides*.
 - d'. Bases of the quills not entirely rufous, this colour confined to the outer web.
 - c". Inner lining of wing leaden grey, as also are the under wing-coverts, the inner webs of the primaries narrowly isabelline; outer tail-feathers black, narrowly margined with isabelline.
 - a. Larger, with very stout bill. *navia*.
 - β. Smaller, with slender bill. *sabota*.
 - d". Inner lining of wing pale or deep rufous, as also the inner webs of the primaries; two outer tail-feathers almost entirely white.
 - γ. Larger; two outer tail-feathers white on outer web. *fringillaris*.
 - δ. Smaller; three outer tail-feathers externally white. *ckeniana*.

13. MIRAFRA APIATA.

L'Alouette bateleuse, Levaill. Ois. d'Afr. iv. pl. 194 (1805); Sund. Crit. om Levaill. p. 46 (1857).

Alda apiata, Vieill. N. Diet. d'Hist. Nat. i. p. 342 (1816); id. and Bonn. Enc. Méth. i. p. 321 (1823); Grill, Zool. Anteckn. p. 40 (1858); Giebel, Thes. Orn. p. 291 (1872).

Alda clamosa, Steph. Gen. Zool. xiv. p. 23 (1826).

Brachonyx apiata, Smith, Ill. Zool. S. Afr. pl. 110. fig. 1 (1849).

Megalophonus apiatus, Bp. Consp. i. p. 244 (1850); Layard, B. S. Afr. p. 215 (1867); Gray, Hand-l. B. ii. p. 122 (1870).

Adult. Above cindery grey, with concealed bars of cinnamon rufous and black on most of the dorsal feathers, as well as all the wing-coverts; head uniform with back, much crested, the feathers blackish in the centre of the plumes, which are also minutely spotted with rufous; hind neck cindery grey, separating the head from the back; quills dark brown, margined with rufous, the inner secondaries with grey like the back, the innermost washed with rufous and crossed with narrow transverse black lines; tail dark brown washed with cindery grey, and tipped with white, the outermost feather broadly edged with fulvous extending over a great portion of the inner web obliquely towards the tip, the centre feathers slightly washed with rufous and minutely barred with blackish in an irregular manner, besides a few spots of the latter here and there; loral feathers minutely tipped with white, and behind the eye a small streak of buffy white; ear-coverts light rufous, inclining to blackish on their hinder margin; rest of the sides of the face light fulvous thickly speckled with blackish; throat whitish, with a few scattered spots of blackish brown; rest of under surface ashy fulvous, the feathers being all broadly margined with this colour, and thus obscuring the pale fawn-colour of their bases, the breast thickly spotted with large triangular marks of dark brown, and on the flanks a few narrow lines of dark brown; the under tail-coverts minutely spotted with dark brown; under wing-coverts fawn-colour, except the outermost, which are washed with ashy brown, like the greater series and the entire inner lining of the wing. Total length 5 inches, culmen 0.55, wing 3.0, tail 2.2, tarsus 1.0.

Hab. Confined to the Cape colony.

The full-plumaged specimens before me of this Lark have not their dates of capture attached; but I believe that I have both winter and summer plumages represented, thus disposing of the idea that *M. apiata* can be the winter plumage of *M. rufipileus*. I therefore append short comparative characters of the two states, the specimen described being in what I consider full winter dress.

Summer plumage.

Upper surface dark brown, the rufous obscure and the grey shade strongly marked only on the lower back and secondaries.

Head dark brown, with scarcely any grey shade or rufous markings.

Hind neck scarcely lighter than the head or back.

Wing-coverts ending in a rufous tint, with no perceptible grey margin.

Winter plumage.

Upper surface grey, the rufous colour in broad and half-concealed bands.

Head entirely grey, mottled with blackish centres to the feathers, and slightly washed here and there with rufous.

Hind neck very clear grey, paler than head or back.

Wing-coverts with a broad whitish grey margin.

Inner secondaries with a narrow blackish shaft-line, from which radiate about six narrow blackish cross lines.

Tail nearly uniform brown, with an obsolete shade of greyish on centre feathers, the external feathers being light fawn-colour on outer web.

Eyebrow pale fawn.

Under surface of body bright fawn, the throat and chest speckled with black.

Inner secondaries dark brown brown in the centre and at entire base of feather, with only a few imperfect radiations of black near the tip.

Tail dark brown, tipped with white, the centre feathers clearly washed with grey as well as slightly tinged with rufous, and plainly marked with blackish radiations and spots near the shafts.

Eyebrow ashy fulvous.

Under surface ashy fulvous, concealing fawn-coloured bases to the feathers, the chest-spots much obscured.

The measurements of Sir Andrew Smith's two specimens are as follows :—

	Total length. in.	culm. in.	wing. in.	tail. in.	tarsus. in.
a. S. Africa (<i>Smith</i>) ..	6·5	0·55	3·4	2·5	1·0
b. S. Africa (<i>Smith</i>) ..	6·5	0·6	3·25	2·4	0 95

The usual Alaudine variation in size is here apparent; but the absence of correct sexing to the specimens prevents me from drawing any deduction.

Captain Shelley shot a male at Stellendorf, in the Cape colony, which had the soft parts as follows :—"Iris hazel; legs white, with a faint flesh-coloured shade; bill dark horn-colour, with the basal two thirds of the lower mandible and the edges of the upper one towards the gape buff." It measured as follows—total length 6 inches, culmen 0·6, wing 3·15, tail 2·55, tarsus 1·05. This bird is in full moult, and seems to be a young individual gaining its first complete dress. On the upper surface it has several conspicuous white margins to the feathers and a great deal of rufous, reviving the idea that it might be *M. rufipilea*—a conclusion which the broad rufous margins to the quills seem to indorse; but I find that the rufous is confined to the outer margin of the primaries, whereas in *M. rufipilea*, of which I believe I have young and old, the rufous extends across both webs. The explanation will, I trust, be found in the fact that the young of *M. apiata* is much more rufous than the adult. In Captain Shelley's specimen the eyebrow is creamy white and very conspicuous, and the entire abdomen is also creamy white. Canon Tristram's collection likewise contains two examples, one marked *M. rufipilea* from Kuruman: the admixture of grey in the rufous and the unfailing character of the quills shows that it is *M. apiata*, notwithstanding the general rufous appearance. It is

probable therefore that *M. apiata* resembles *M. rufipilea* in its young stage, though differing much in the adult.

Specimens examined.

E mus. Brit.:—*a*, *b*, ad. South Africa (*Sir A. Smith*). *c*. Capetown (*C. J. Andersson*).

E mus. G. E. Shelley:—*a*, ♂ imm. Stellendorf, Cape colony, January 22, 1874 (*G. E. S.*).

E mus. H. B. Tristram:—*a*. Cape of Good Hope. *b*, *c*. South Africa (*Layard*). *d*. Kuruman (*Layard*).

14. *MIRAFRA RUFIPILEA*.

L'Alouette à calotte rousse, Levaill. Ois. d'Afr. iv. pl. 198 (1805); Sundev. Crit. om Levaill. p. 46 (1857).

Alauda rufipilea, Vieill. N. Dict. d'Hist. Nat. i. p. 345 (1816); Sharpe, Cat. Afr. B. p. 72 (1871).

Megalophonus rufipileus, Gray, Gen. B. ii. p. 382 (1844); Bp. Consp. i. p. 243 (1850); Layard, B. S. Afr. p. 211 (1867); Gray, Hand-l. B. ii. p. 122 (1870); Ayres, Ibis, 1871, p. 268.

Brachonyx pyrrhonota, Smith, Ill. Zool. S. Afr. Aves, pl. cx. fig. 2 (1849, nec Vieill.).

Alauda fasciolata, Sundev. Œfv. K. Vet. Akad. Förh. Stockh. 1850, p. 99 (1850).

Megalophonus fasciolatus, Licht. Nomencl. p. 39 (1854); Gray, Hand-l. ii. p. 122 (1870).

Megalophonus apiatus, Ayres, Ibis, 1869, p. 295.

Adult male. Above entirely cinnamon rufous, the feathers of the crown faintly tipped with whitish, these being much broader and more distinct on the back, scapulars, and wing-coverts, these light tips relieved by a subterminal line of black, most of the feathers being blackish at base and having one or two other concealed bars of blackish; hind neck and interscapular region brighter cinnamon, with central streaks of deeper cinnamon; wing-coverts cinnamon like the back, but the margins to the feathers broader and the black subterminal margins more pronounced; quills rufous for two thirds of their length, brown for the terminal third, the secondaries browner, the inner web almost entirely brown, the outer one mottled with the same externally, the innermost deep cinnamon, like the back, with the same distinct margins; tail brown, slightly tipped with rufous, the two outer feathers externally margined with creamy buff, the outermost more broadly, the two centre tail-feathers cinnamon, dark brown in the centre, from which radiate several imperfectly formed bars and mottlings of blackish; lores and a fairly distinct eyebrow buffy white; ear-coverts rufous, deeper on the hinder margin; cheeks and sides of neck buffy white, minutely speckled with dark brown; throat buffy white, unspotted; rest of under surface pale fawn-colour, rather obscured in some places by fulvous margins to the feathers, the fore neck and chest numerous marked with little round spots of black; under wing-coverts deep cinnamon, like the inner lining of the wing; "bill pale, with the tip

dusky; tarsi and feet pale dusky; iris light tawny" (*Ayres*). Total length 6·3 inches, culmen 0·6, wing 3·35, tail 2·6, tarsus 1·05.

Young. Similar to the adult, but far deeper cinnamon, and everywhere barred with black wavy lines on the upper surface, the head included; tail with a broad centre of ashy brown, followed by another subterminal line along the apical portion of the feather, this line evidently breaking up into the radiations from the shaft which are seen in the tail-feathers of the adult; ear-coverts cinnamon, thickly spotted with black; under surface of body isabelline, the throat with a few concealed brown bars, the flanks and thighs deeper rufous slightly mottled with brown barrings, the chest much deeper cinnamon, especially on the sides; the latter being slightly varied with blackish wavy lines, the centre of the chest sparsely spotted with blackish. Total length 5·8 inches, culmen 0·6, wing 3·0, tail 2·35, tarsus 1·0.

Hab. The northern districts of the Cape colony, ranging into the Transvaal.

This species is nearly allied to *M. apiata*, which it resembles in its radiated tail and peculiar mottled plumage. It is, however, not the same bird, but a distinct species, distinguished by its general cinnamon-coloured appearance and rufous head, but particularly by its red wings, the cinnamon-colour occupying the basal two thirds of both webs, and not being confined to the basal portion of the outer web, as in *M. apiata*. In size the two species appear to be very similar.

Specimens examined.

E mus. R. B. S.:—juv. Transvaal (*T. Ayres*).

E mus. T. E. Buckley:—a, ♂ ad. Orange Free State, June 5, 1873 (*T. E. B.*).

E mus. H. B. Tristram:—a, ad. Colesberg (*Arnot*). b. Colesberg (*Ortlepp*). c. Transvaal (*Ayres*).

15. *MIRAFRA AFRICANA.*

Mirafra africana, Smith, Report Exp. S. Afr. App. p. 47 (1836); id. Ill. Zool. S. Afr. Aves, pl. lxxxviii. fig. 1 (1849); Bianc. Spec. Zool. Mosamb. fasc. xviii. p. 327 (1867).

Alauda planicola, Licht. Verz. Vög. Kafferl. p. 14 (1842, *deser. nullā*); Giebel, Thes. Orn. p. 299 (1872).

Megalophonus africanus, Gray, Gen. B. ii. p. 382 (1844); Layard, B. S. Afr. p. 213 (1867).

Megalophonus occidentalis, Hartl. Orn. W. Afr. p. 153 (1857); Bocage, Journ. Lisb. ii. p. 48 (1868).

Megalophonus rostratus, Hartl. Ibis, 1863, p. 327, pl. ix.; Layard, B. S. Afr. p. 212 (1867).

Megalophonus planicola, Finsch & Hartl. Vög. Ostaf. p. 463 (1870); Gray, Hand-l. B. ii. p. 122 (1870); Ayres, Ibis, 1871, p. 259.

Alauda africana, Sharpe, Cat. Afr. B. p. 71 (1871); Buckley, Ibis, 1874, p. 384.

Adult male in summer plumage. Above light fawn-brown, all the

feathers with a distinct blackish shaft-streak down the centre and margined with ashy fulvous; the rump slightly more ashy than the back, narrowly streaked with brown; the upper tail-coverts shading off into light fulvous and having dark brown shaft-stripes; wing-coverts fawn-colour, darker brown in the centre of the feather, margined with fulvous and streaked with dark brown along the shaft, the greater coverts light rufous towards their tips; primary coverts rufous fawn, with narrow whitish margins; quills rufous fawn, gradually shading off into dark brown, which occupies about the terminal third of the quills, which are margined with ashy white or fawn-colour: the secondaries brown, washed with fawn-colour externally, and broadly margined and tipped with ashy buff; tail dark brown, the feathers margined with ashy buff, especially the two centre ones, which are rufous fawn at base, extending some way up the margins of the feathers, a shade of the same colour extending over the other feathers near their base, the outer feather creamy buff on the outer web, the penultimate one narrowly margined externally with the same colour; crown of head bright fawn-colour, with a few narrow shaft-lines of dark brown, the forehead minutely streaked, giving it a certain obscurely mottled appearance; lores and a rather broad eyebrow buffy white, as also the sides of the face, the cheeks and ear-coverts minutely spotted with dark brown, the ear-coverts washed with rufous, and inclining to dark brown on their upper margin; throat white, the rest of the under surface isabelline buff, washed with bright fawn-colour, minutely spotted with dark brown on the lower throat and chest, and streaked with the same on the sides of the breast; under wing-coverts entirely rich fawn-colour, a little brighter than the inner lining of the wing, which is rufous and very conspicuous; "upper mandible dusky, lower mandible pale; tarsi and feet pale; iris light hazel" (*Ayres*).

Total length 7 inches, culmen 0·8, wing 4·0, tail 3·0, tarsus 1·3.

Adult female. Smaller than male, and with a much thinner bill.

Total length 6·8 inches, culmen 0·75, wing 3·5, tail 2·7, tarsus 1·2.

Winter plumage. Much darker brown than in summer, and not nearly so rufous on the upper surface, the rufous of the crown entirely obscured by the broad dark-brown shaft-stripes, and the forehead entirely brown, shaded with ashy and slightly tinged with rufous; the hinder back and rump decidedly shaded with ashy; below rather more richly coloured than in summer, the breast largely marked with triangular spots of dark brown; hind neck decidedly more ashy, separating the head from the back.

Young. Obscure brown, with hardly any rufous shade above; the hind neck washed with ashy fulvous; all the feathers very broadly black in the centre, and subterminally barred with a crescentic black line, very conspicuous before the fulvous tips to the feathers, more distinct on the wing-coverts, which incline to light fawn-colour; quills much as in adult, and rufous at base, the inner secondaries dark brown, with a distinct ashy whitish margin, before which runs another subterminal line of black; tail brown, shaded with ashy on

the margins of the feathers, the external web of the outer tail-feather creamy white, the penultimate one broadly margined with the same; over the eye a broad superciliary streak of creamy buff; lores and sides of face buffy white, the cheeks thickly spotted with black, the ear-coverts washed with rufous; throat white, with a few tiny specks of brown on the lower part; rest of under surface isabelline fulvous, the breast washed with fawn rufous and mottled with rufous-brown bars, some of the new triangular-spotted feathers just appearing.

Hab. The eastern districts of the Cape colony, ranging from Natal and the Transvaal into Damara Land.

Specimens examined.

E mus. Brit.:—*a*, ad. South Africa (*F. Campbell*). *b*, *c*, South Africa (*Sir A. Smith*). *d*, ♀ ad. Cape of Good Hope. *e*, *f*, *g*, ♂ ♀. Natal (*Ayres*). *h*, *i*, ♂. Elephant Vley, Damara Land, Nov. 12th & 29th, 1859 (*C. J. Andersson*).

E mus. R. B. S.:—*a*, juv. Eland's Post, March 15th, 1870 (*T. C. Atmore*). *b*, *c*, *d*, ♂ ♀. Eland's Post (*T. C. A.*). *e*, ♂. Eland's Post, June 1870 (*T. C. A.*). *f*, ♂. Transvaal (*Ayres*).

E mus. H. B. Tristram:—*a*. Natal (*Ayres*).

16. *MIRAFRA CHENIANA**.

Megalophonus chenianus, Gray, Gen. B. ii. p. 382 (1844); Bp. Consp. i. p. 244 (1850); Layard, B. S. Afr. p. 214 (1867, *ex Smith*); Ayres, Ibis, 1871, p. 259.

Mirafra cheniana, Smith, Ill. Zool. S. Afr. Aves, pl. 89. fig. 2 (1849, *err. pro fig. 1*).

Alauda cheniana, Giebel, Thes. Orn. p. 293 (1872).

Adult (type of species). Above dark brown, almost blackish, the feathers margined with sandy rufous, especially broad on the hind neck, some few of the scapular feathers with narrow fulvous tips; wings *rufous*, the coverts having dark brown bases, the greater series dark brown, margined with rufous, shading off into fulvous on extreme edge; quills dark brown, with very broad rufous margins, the edges of the secondaries more fulvous; upper tail-coverts dark brown, with ashy fulvous margins; tail dark brown, the two centre feathers margined with rufous, shading off into fulvous towards the tips; the two outermost feathers pure white, with a touch of brown near the base of the outer, but occupying the half of the inner web of the penultimate feather for all its length, as well as a short distance towards the end of the shaft; feathers above and below the eye, forming a distinct eyebrow, creamy buff; ear-coverts rufous, slightly mottled with dark brown, as also are the cheeks and sides of the neck, which are white; throat white, unspotted; rest of under surface creamy buff, strongly inclining to rufous on the chest, which is marked with triangular spots of dark brown, inclining to streaks on the sides of

* The name of *Alauda chuana*, Smith (Report Exp. S. Afr., App. p. 46), probably refers to this species, but was afterwards suppressed by that author. The description, however, is scarcely good enough to allow of a strict identification; and it seems best to acquiesce in the wishes of Sir Andrew Smith, and suppress the title (*cf.* Newton, Ibis, 1868, p. 270; Layard, *cp. cit.* 1869, p. 78).

the breast; flanks and thighs washed with rufous; under tail-coverts buffy white; under wing-coverts deep rufous; inner lining of wing ashy brown, inclining to rufous on the inner web; "upper mandible deep brownish red, lower mandible deep sienna-yellow; legs, toes, and claws pale buff-orange, tinged with flesh-red" (*Sir A. Smith*), "iris dark brown" (*Ayres*). Total length 5·3 inches, culmen 0·5, wing 2·85, tail 2·9, tarsus 0·9.

Adult male. Total length 5·0 inches, culmen 0·5, wing 2·85, tail 2·0, tarsus 0·9.

Hab. Eastern portions of the Cape colony, ranging into the Transvaal.

Sir Andrew Smith, in describing the type as a male, writes as follows:—"A second adult specimen of this species was obtained, but its sex was not recorded. In size it was rather superior to the male specimen just described; and the feathers of the upper parts are broadly edged with a colour intermediate between orpiment and reddish orange: the latter colour on the breast is also much darker: in other respects the two are similar."

Both specimens referred to by Sir Andrew are in the collection still; and the one I have described is the "larger" bird; but, as will be seen by the measurements, the difference in size is more apparent than real, as the specimen is a little overstuffed.

I have not yet seen the winter plumage of this bird, and have only one male specimen in my collection, sexed by Mr. Atmore, and measuring 2·95 in the wing and 0·9 in the tarsus.

Specimens examined.

E mus. Brit.:—*a*, *b*, ♂ ad. South Africa (*Sir A. Smith*, types of species).

E mus. R. B. S.:—*a*, ♂ ad. Whittlesea Flats, South-east Africa (*T. C. Atmore*).

E mus. H. B. Tristram:—*a*, ♂. Transvaal (*Ayres*).

17. MIRAFA SABOTA.

Mirafra sabota, Smith, Rep. Exp. S. Afr. App. p. 47; id. Ill. Zool. S. Afr. *Aves*, pl. 89. fig. 2 (1849, *err. pro* fig. 1).

Megalophonus sabota, Gray, Gen. B. ii. p. 382 (1844); Bp. Consp. i. p. 244 (1850); Layard, B. S. Afr. p. 213 (1867, *ex* Smith); Gray, Hand-l. B. ii. p. 122 (1870).

Megalophonus chenianus, Gray, Hand-l. B. ii. p. 122 (1870).

Megalophonus nævius, Ayres, Ibis, 1871, p. 259.

Alauda sabota, Giebel, Thes. Orn. p. 300 (1872).

Alauda nævia, Buckley, Ibis, 1874, p. 283.

Adult male. Above sandy fawn-colour, with distinct mesial centres of blackish brown to all the feathers, more closely mottled on the head, which appears in consequence rather darker than the back; the hind neck distinctly washed with ashy fulvous, slightly separating the head from the back; wing-coverts dark brown in the centre, with broad fawn-coloured margins, shading off on the extreme edge into fulvous, the edge of the wing whitish, and the primary coverts dull

ashy brown, distinctly edged and tipped with white; quills dark brown, the primaries narrowly margined with sandy buff and tipped with whitish, the secondaries broadly edged with fawn-colour exactly like the wing-coverts; rump coloured like the back; upper tail-coverts dark brown, tipped and margined with fulvous, and washed with fawn-colour near the base; tail-feathers blackish, distinctly margined with sandy fawn-colour and tipped with whitish, the borders of the two centre feathers and the external one the broadest; a very distinct eyebrow white; feathers in front of the eye blackish, with a line of white feathers under the latter; ear-coverts sandy fawn-colour, darker on the upper margin, and streaked with fulvous; cheeks buffy white, spotted with black, and forming a moustache on each side of the throat, which is buffy white and unspotted, excepting a few blackish spots on the lower part; rest of the under surface isabelline sand-colour, the chest plainly covered with triangular spots of dark brown, some of the spots inclining to rufous; sides of the body streaked, and the flanks washed with sandy rufous; under wing-coverts ashy, with broad whitish margins, some of them washed with sandy colour; the inner lining of wing light ashy brown, inclining to pale isabelline near the base of the inner web; "upper mandible and tip of lower one light reddish brown, rest of the lower one sienna-yellow; legs, toes, and claws sienna-yellow, tinted with flesh-red; claws faintly shaded with light reddish brown" (*Sir A. Smith*). Total length 5·8 inches, culmen 0·55, wing 3·3, tail 2·4, tarsus 0·9.

Adult female. Similar to the male. Total length 5·5 inches, culmen 0·6, wing 3·25, tail 2·25, tarsus 0·9 (*mus. H. B. Tristram*).

Hab. North-eastern districts of the Cape colony, ranging into the Transvaal.

The summer plumage is different from the winter dress only in being much darker by reason of the absence of light margins to the feathers of the upper surface, which is also much more rufous; underneath the chest is washed with rufous, and the black spots are more distinct; the inner lining of the wing is also deeper and more leaden grey.

Specimens examined.

E mus. Brit. :—*a*. South Africa, lat. 54° (*Sir A. Smith*). *b*, *c*. South Africa (*Sir A. Smith*). *d*, ♂ ad. Transvaal, July 10th, 1873 (*T. E. Buckley*).

E mus. R. B. S. :—*a*, ♂ ad. Transvaal (*T. Ayres*).

E mus. H. B. Tristram :—*a*, *b*, *c*, ♂ ♀. Transvaal (*Ayres*).

18. *MIRAFRA NÆVIA*.

Alauda nævia, Strickl. Contr. Orn. 1852, p. 152; Gray, Hand-l. ii. p. 118 (1870); Sharpe, Cat. Afr. B. p. 72 (1871); Giebel, Thes. Orn. p. 298 (1872).

Alauda sabota, Giebel, Thes. Orn. p. 300 (1872).

Megalophonus sabota, Gurney, in Anderss. B. Dam. Ld p. 195 (1872).

Megalophonus nævius, Gurney, t. c. p. 199 (1872).

Adult male in summer plumage. Above sandy rufous, with dark

brown centres to the feathers, the head with rather paler sandy margins; the hind neck distinctly inclining to ashy, and separating the head from the back; scapulars blackish in centre, with very broad margins of sandy rufous on each side; wing-coverts coloured like the back, with concealed blackish centres to the feathers, which are margined with sandy, shading off into fulvous on the extreme edge, the greater series more broadly margined, the primary coverts more narrowly; quills blackish, the primaries narrowly tipped with greyish white and margined externally with sandy rufous, the secondaries much more broadly, and bordered with fulvous on their extreme edge; upper tail-coverts sandy rufous, inclining to brown in the centre of the feathers, and narrowly tipped with greyish buff; tail black, very narrowly margined and tipped with sandy buff, the centre feathers broadly margined with sandy rufous, the outermost externally margined with a narrow edging of light sandy colour, changing to white at extreme tip: lores and a tolerably plain eyebrow isabelline; feathers in front of the eye dusky, those under it isabelline, and marked with blackish; ear-coverts dark brown, very plainly and regularly streaked with sandy buff; throat and cheeks white, the latter washed with isabelline on the chest and sides of the body, the lower throat and chest plainly spotted with triangular markings of light brown; under wing-coverts ashy brown, the innermost washed with sandy, the inner lining of the wing entirely ashy brown also, excepting the base of the inner web, which inclines to sandy; "iris hazel" (*T. C. Atmore*). Total length 6·5 inches, culmen 0·75, wing 3·5, tail 2·6, tarsus 0·95.

Adult female. Rather smaller than the male. Total length 5·7 inches, culmen 0·65, wing 3·4, tail 2·3, tarsus 0·9.

Winter plumage. I have four specimens in my own collection in full winter plumage, which does not differ so much on the upper surface as in some of the South-African Larks. It is much more mealy and of a paler sand-colour, the grey collar round the hind neck being very distinct, as well as the white eyebrow and the margins to the wing-coverts and quills; under surface of body white, tinged with isabelline on the chest, flanks, and thighs, the chest with a few narrow streaks of pale brown, the entire lining of the wing ashy, as also the wing-coverts, some of which are margined with sand-colour.

Hab. From the north-eastern districts of the Cape colony (summer), ranging into Damara Land (winter).

This species is a large edition of *A. sabota*, to which it can hardly be united by reason of its enormous bill.

In other respects it agrees very fairly, especially in the lead-coloured wing-lining. Some mistake may have arisen in the sexing of the specimens, and a large series carefully collected will perhaps rejoin the two species. As will be seen, however, by the specimens which I have, the material at my disposal is tolerably conclusive.

Specimens examined.

E mus. R. B. S.—*a, b, c, ♂ æstiv. Griqualand (T. C. Atmore).*